

REMARKS:

Claims 1-24 are pending. Claims 1, 9, 13, and 22 are amended. Applicants respectfully request entry of the above amendments and consideration of the following remarks.

Rejections Under 35 U.S.C. § 103(a)

Claims 1, 7-9, 11-13, 15, 20-22 and 24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tremblay (U.S. Patent No. 5,373,915) in view of Kang (U.S. Patent No. 4,785,906). Claims 2, 3, 5, 6, 16, 18, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tremblay in view of Kang and further in view of Goodrich (U.S. Patent No. 5,261,779). Claims 4 and 17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tremblay in view of Kang and further in view of DuPuy et al. (U.S. Patent No. 6,238,169). Claims 10, 14, and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tremblay in view of Kang and further in view of Budd et al. (U.S. Patent No. 6,077,025).

The foundation of each rejection under 35 U.S.C. § 103(a) presented by the Examiner is the combination of Tremblay and Kang. As conceded by the Examiner, Tremblay is silent concerning the drive system being capable of continuing actuation once begun and after the buckle and belt are in the disengaged state. The Examiner cites Kang in an effort to cure the deficiencies of Tremblay.

Tremblay has been discussed at length in previous responses. Kang teaches a seat belt buckle having a built-in microswitch. The vast majority of the Kang specification is directed to the structural features of the seat belt, such as how the microswitch 9 is mounted with the buckle body 1, and how inserting the fastening ring 13 into the buckle body 1 actuates the microswitch 9. Almost in passing, Kang discloses that the “microswitch 9 is electrically interconnected with the ignition switch and the starter motor,” and that “the engine cranks only ... after buckling the seat belt 15.” (Kang, col. 2, lines 27-30). In the portion of the specification relied on by the Examiner, Kang states only that “[a]fter the engine is once cranked, it will continue to run, and said seat belt 15 can be unbuckled, allowing the vehicle to start, be driven and stopped.” (Kang, col. 2, lines 55-57). Kang provides no further detail or explanation regarding how the microswitch 9 is “electrically interconnected” to the vehicle wiring, or how it achieves its stated method of operation.

For the reasons set forth below, Applicants respectfully submit that the combination of Tremblay and Kang is improper and does not render the claimed invention obvious. In support of this position, Applicants also submit herewith the **DECLARATION OF JAMES R. PIERROU PURSUANT TO 37 C.F.R. § 1.132** (the "Pierrou Decl.").

1. THE EXAMINER HAS FAILED TO CONSIDER THE INVENTION AS A WHOLE.

In determining the differences between the prior art and the claims, the question under 35 U.S.C. 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious. *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 218 USPQ 871 (Fed. Cir. 1983); *Schenck v. Nortron Corp.*, 713 F.2d 782, 218 USPQ 698 (Fed. Cir. 1983) (Claims were directed to a vibratory testing machine (a hard-bearing wheel balancer) comprising a holding structure, a base structure, and a supporting means which form "a single integral and gaplessly continuous piece." *Nortron* argued the invention is just making integral what had been made in four bolted pieces, improperly limiting the focus to a structural difference from the prior art and failing to consider the invention as a whole. The prior art perceived a need for mechanisms to dampen resonance, whereas the inventor eliminated the need for dampening via the one-piece gapless support structure. "Because that insight was contrary to the understandings and expectations of the art, the structure effectuating it would not have been obvious to those skilled in the art." 713 F.2d at 785, 218 USPQ at 700 (citations omitted).). (MPEP 2141.02 I.)

As evidenced by, among other things, the Advisory Action dated April 20, 2007, in which the Examiner noted that "alarm systems" were commonly known as being capable of continuing operation once activated, the Examiner is not viewing the invention as a whole. The claims are directed to a *restraint system for a passenger lift* that allows movement of the lift, once begun, to continue regardless of whether a current path defined by the releasable engagement of the safety restraint (e.g. the belt and buckle) is opened or closed. In the most recent Office action, the Examiner argues only that it would have been obvious in view of Kang to make the system of Tremblay capable of continuing operation. (Office action of 10/04/07, ¶¶ 13-14, 24-25, 35-36, 44-45). In doing so, the Examiner limits the obviousness inquiry to a single operational difference between the claimed invention and the prior art, and fails to consider the claimed invention as a whole.

As taught by Tremblay, safety dictates that if the restraint is not fastened, all movement of the passenger lift must be prevented, whereas the inventors of the claimed invention discovered that it is actually better to allow continued operation of the passenger lift, once begun, to prevent stranding a lift passenger in a partially elevated position. (*See* Pierrou Decl. ¶¶ 16-19; *See also* ¶ 0007 Applicant’s specification). Specifically, the inventors recognized that if a passenger is positioned on the lift while it is moving between the vehicle floor and the ground, and if during that time there is an electrical short or other failure of the circuitry associated with the safety restraint, it would be far better for operation of the lift to continue. (Pierrou Decl. ¶¶ 17, 18). This is important because it prevents the passenger (often wheelchair-bound) from being stranded in an elevated position on an essentially inoperable lift. Although Kang teaches a *vehicle* that is capable of continuing operation if the seat belt comes unbuckled, as discussed further herein, one of skill in the *relevant* art of *passenger lifts* at the time of the invention would have followed the teachings of Tremblay, not the teachings of Kang. (*See* Section 4, below; *See also*, Pierrou Decl. ¶¶ 13-15).

Because the insight provided by the inventors was clearly “contrary to the understandings and expectations of the art” (e.g. the teachings of Tremblay) at the time of the invention, developing a restraint system for a passenger lift capable of continuing operation in the manner claimed would not have been obvious to one of ordinary skill in the art. (MPEP 2141.02 I.). The Examiner’s rejection of the claims 1-24 under 35 U.S.C. § 103(a) is therefore improper.

2. REFERENCES CANNOT BE COMBINED WHERE REFERENCES TEACH AWAY FROM THEIR COMBINATION.

It is improper to combine references where the references teach away from their combination. *In re Grasselli*, 713 F.2d 731, 743, 218 USPQ 769, 779 (Fed. Cir. 1983) (The claimed catalyst which contained both iron and an alkali metal was not suggested by the combination of a reference which taught the interchangeability of antimony and alkali metal with the same beneficial result, combined with a reference expressly excluding antimony from, and adding iron to, a catalyst.). (**MPEP 2145 X. D. 2.**)

Tremblay expressly and repeatedly teaches that the safety of his passenger lift is “significantly increased” because the electrical interlock of the restraint belt prevents *all movement* of the lift when the restraining belt is unbuckled. (*See, e.g.*, Tremblay at col. 2:47-51; col. 5:42-45, 65-68; and col. 6:9-12, 32-36; *See also*, Pierrou Decl. ¶¶ 10-12). Tremblay explicitly cites enhanced safety as the motivation behind his improvement to wheelchair lifts.

Kang is directed to an interlock system for the seat belt of a *vehicle* and teaches exactly the opposite. Kang teaches that the vehicle, once started, will continue to run even if the seat belt is unbuckled. Although Kang does not expressly state why his system is configured this way, it is clear even to the lay observer that shutting down the vehicle because a seat belt comes unfastened during operation would present an extremely dangerous situation. For example, Kang explains that his system allows the vehicle “to start, be driven, *and stopped*” (emphasis added) if the seat belt is unbuckled. (Kang, col. 2, lines 55-57).

The teachings of Tremblay expressly exclude a system that would allow continued operation of the lift, such as the system proposed by the Examiner in combining Tremblay with Kang. According to Tremblay, a lift that does not prevent *all movement* unless the restraining belt is fastened would be unsafe. Because Tremblay teaches away from the combination proposed by the Examiner, that combination is improper. (MPEP 2145 X. D. 2.).

3. THE COMBINATION OF TREMBLAY AND KANG IS INSUFFICIENT TO RENDER THE CLAIMS *PRIMA FACIE* OBVIOUS BECAUSE THE PROPOSED MODIFICATION CHANGES THE PRINCIPLE OF OPERATION OF THE TREMBLAY REFERENCE.

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959) (Claims were directed to an oil seal comprising a bore engaging portion with outwardly biased resilient spring fingers inserted in a resilient sealing member. The primary reference relied upon in a rejection based on a combination of references disclosed an oil seal wherein the bore engaging portion was reinforced by a cylindrical sheet metal casing. Patentee taught the device required rigidity for operation, whereas the claimed invention required resiliency. The court reversed the rejection holding the "suggested combination of references would require a substantial reconstruction and redesign of the elements shown in [the primary reference] as well as a change in the basic principle under which the [primary reference] construction was designed to operate." 270 F.2d at 813, 123 USPQ at 352.). (MPEP 2143.01 VI.)

The claims are directed to a restraint system for a passenger lift that allows movement of the lift, once begun, to continue regardless of whether a current path defined by the releasable engagement of the safety restraint (e.g. the belt and buckle) is opened or closed. Tremblay, the primary reference of the Examiner’s rejection, discloses a passenger lift system wherein *all*

movement of the lift is prevented if the safety restraint is not fastened. Tremblay teaches that if the restraint is not fastened, all movement must be prevented for safety, whereas the claimed invention requires that once begun, movement is allowed to continue.

The Examiner has proposed modifying Tremblay in view of the teachings of Kang to arrive at the claimed invention. Not only would the Examiner's proposed combination require a substantial reconstruction and redesign of the Tremblay device (compare Fig. 5 of Tremblay with Fig. 4 of the application), but it would completely change the basic principle under which Tremblay is designed to operate. Rather than halting all lift movement when the safety restraint is unfastened during movement, movement would instead be allowed to continue. For this reason, the combined teachings of the references are insufficient to render the claims *prima facie* obvious. (MPEP 2143.01 VI.). The Examiner's rejection of the claims 1-24 under 35 U.S.C. § 103(a) is therefore improper.

4. WHERE THE TEACHINGS OF THE PRIOR ART CONFLICT, THE EXAMINER MUST WEIGH THE SUGGESTIVE POWER OF EACH REFERENCE

The test for obviousness is what the combined teachings of the references would have suggested to one of ordinary skill in the art, and all teachings in the prior art must be considered to the extent that they are in analogous arts. Where the teachings of two or more prior art references conflict, the examiner must weigh the power of each reference to suggest solutions to one of ordinary skill in the art, considering the degree to which one reference might accurately discredit another. *In re Young*, 927 F.2d 588, 18 USPQ2d 1089 (Fed. Cir. 1991). **(MPEP 2143.01 II.)**

As discussed above, Tremblay and Kang conflict in that Tremblay teaches a system (i.e. a passenger lift) that prevents *all movement* upon disengagement of a safety restraint, whereas Kang teaches a system (i.e. a vehicle) that allows for continued operation upon disengagement of a safety restraint. Assuming *arguendo* that Tremblay and Kang are in analogous arts, in the context of the claimed invention (i.e. passenger lifts), the teachings of Tremblay clearly outweigh the teachings of Kang. (See Pierrou Decl. ¶ 15). When viewed together, the teachings of Tremblay, because they relate specifically to passenger lifts, would carry substantially more suggestive power to one of ordinary skill in the art of passenger lifts than the teachings of Kang, which relate to seat belts for vehicles. In fact, Tremblay *was aware* of automotive seatbelt systems such as those taught by Kang, and deemed such systems unsuitable for use in passenger

lifts, electing instead to develop a system in which *all* lift movement would be prevented if the safety restraint was not fastened. (*See Tremblay*, col. 2 lines 22-25). For these reasons, and as stated by Mr. Pierrou, one of skill in the art viewing Kang in light of Tremblay would likely completely dismiss the teachings of Kang as inapplicable to the design of a restraint system for a passenger lift. (Pierrou Decl. ¶ 15).

The Examiner's rejection under § 103(a) is predicated on the notion that one of skill in the art of *passenger lifts* would choose to follow the teachings of Kang over the teachings of Tremblay. As discussed above, in the context of passenger lifts, the teachings of Tremblay completely discredit the teachings of Kang. The combination of Tremblay and Kang proposed by the Examiner is therefore improper. (MPEP 2143.01 II. and MPEP 2145 X. D. 2).

5. AT THE TIME OF THE INVENTION, THE INVENTORS WERE PROCEEDING CONTRARY TO THE ACCEPTED WISDOM IN THE ART.

The totality of the prior art must be considered, and proceeding contrary to accepted wisdom in the art is evidence of nonobviousness. *In re Hedges*, 783 F.2d 1038, 228 USPQ 685 (Fed. Cir. 1986) (Applicant's claimed process for sulfonating diphenyl sulfone at a temperature above 127°C was contrary to accepted wisdom because the prior art as a whole suggested using lower temperatures for optimum results as evidenced by charring, decomposition, or reduced yields at higher temperatures.). (MPEP 2145 X. D. 3.)

In addition to citing Tremblay, discussed at length above, the Examiner has also cited U.S. Patent No. 6,077,025 (Budd et al.) in rejecting claims 10, 14, and 23. Budd and Tremblay are both directed to passenger/wheelchair lifts and are classified in the same two classes and subclasses within the Manual of Patent Classification. To the best of Applicants' knowledge, Budd and Tremblay are the only prior art references of record that are both directed to passenger lifts and teach a safety restraint having an electronic interlock.

Budd teaches a wheelchair barrier or restraint system that in some embodiments includes "a safety interlock switch circuit *which prevents lift platform motion* when the gate barrier is open." (*See Budd*, Abstract). Budd's system differs from Tremblay's in that the safety barrier taught by Budd is usually positioned in the vehicle doorway (rather than on the lift platform) to prevent wheelchairs from rolling out of the vehicle when the platform is in the lowered position. (*See Budd*, col. 3, lines 21-25). However, Budd does disclose that the safety barrier may also be positioned on the platform itself. (*See Budd*, col. 3, lines 30-32). Embodiments that do not

include an electronic interlock that prevents all platform movement when the gate barrier is open are instead provided with a mechanical interlock that prevents the gate from opening whenever the platform is not in the raised position. (*See e.g.*, Budd, col. 6, lines 54-56).

Like Tremblay, Budd teaches that all lift movement is prevented whenever the barrier is not closed and the platform is not in a fully elevated position, such as during platform movement. Budd teaches the use of a spring-type interlock switch or “kill switch” that opens whenever the barrier is moved to an intermediate or open position. When the switch opens, the lift power source or hydraulic pumps are shut off, thereby preventing or “arrest[ing]” (i.e., stopping once started) further movement of the lift. (*See* Budd, col. 6, lines 25-53; col. 12, lines 15-28, 41-45; col. 13, lines 20-50). Although Budd disparages Tremblay’s use of a belt as a barrier (*See* Budd, col. 2, lines 15-31), favoring “café-style” P-shaped barriers, Budd’s interlock system is configured to operate in precisely the same manner as the interlock system of Tremblay, namely, to prevent lift movement when the safety barrier/belt is not closed or secured.

Budd was filed approximately 5 years after Tremblay issued as a patent, and issued about 2 years before the filing of the present application. As Budd and Tremblay make clear, the accepted wisdom in the passenger lift industry prior to the present invention was to prevent *all movement* of the lift whenever certain safety conditions, particularly the fastening or closure of a safety barrier, were not met. (*See, e.g.*, Budd, col. 13, lines 22-25; Tremblay col. 2 lines 47-51, col. 5 lines 42-45 and 65-68, and col. 6 lines 9-12 and 32-36; *See also*, Pierrou Decl. ¶¶ 16, 17). That the inventors proceeded contrary to the accepted wisdom of the art is further evidence of non-obviousness with respect to the claimed invention. (MPEP 2145 X. D. 3.). Claims 1-24 are therefore allowable.

Amendments to Claims 9, 13, and 22

Applicants have amended claims 9, 13, and 22 in an effort to both advance prosecution and reduce the number of claims in a future appeal, should one prove necessary. In rejecting claims 9, 13, and 22, the Examiner has cited the tab 70 of Tremblay as comprising the claimed lock, stating that the tab prevents disengagement between the belt 68 and the buckle 64. (Office Action of 10/04/07, ¶ 19). The tab 70 of Tremblay is coupled to the end of the flexible strap 68 and matingly interlocks with the buckle 64. When the tab is inserted into the buckle 64, the strap 68 extends between the handrails 60, 62 across the platform.

Claim 9 is amended and recites:

The assembly as recited in claim 1, wherein the safety restraint system further comprises a lock electrically coupled to the electrical system, the lock preventing disengagement between the belt and the buckle in response to a signal from the electrical system during movement of the platform.

Neither Tremblay nor Kang teaches or suggests the subject matter of claim 9. The tab 70 of Tremblay is not electrically coupled to the electrical system. The tab 70 is simply one portion of a conventional seat belt coupling that can be freely connected and disconnected from the buckle 64 at any time, presumably using a push button or other manual release. Furthermore, neither the tab 70 nor any other structure can “prevent disengagement ... in response to a signal from the electrical system during movement of the platform.” No such structure is taught or suggested by Tremblay or Kang. Claim 9 is therefore allowable.

Claims 13 and 22 are also amended and recite, among other things:

... a lock coupled to the buckle, the lock preventing releasable disengagement of the belt from the buckle during movement of the lift system, and allowing releasable disengagement of the belt from the buckle when the lift system is at rest.

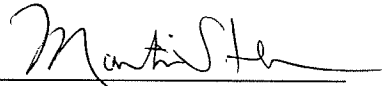
Neither Tremblay nor Kang teach or suggest the subject matter of amended claims 13 and 22. As discussed above, the tab 70 of Tremblay is one portion of a conventional seat belt coupling that can be freely connected and disconnected from the buckle 64 *at any time*, presumably using a push button or other manual release. The claimed lock, on the other hand, only allows releasable disengagement of the belt from the buckle when the lift system is at rest. No such structure is taught or suggested by Tremblay or Kang. Claims 13 and 22 are therefore allowable.

Support for the amendments to claims 9, 13, and 22 may be found at ¶ 0053 of Applicants specification.

CONCLUSION:

In view of the foregoing, allowance of claims 1-24 is respectfully requested. The undersigned is available for telephone consultation during normal business hours.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Martin L. Stern", written over a horizontal line.

Martin L. Stern
Reg. No. 28,911

Docket No. 018778-9026
Michael Best & Friedrich LLP
Two Prudential Plaza
180 North Stetson Avenue, Suite 2000
Chicago, Illinois 60601
(312) 222-0800